

REMARKS/ARGUMENTS

REMARKS

Claims 1-14, 17-21, 24, 34-35, 37-44, 47-48, and 51 are pending in this application and have not been withdrawn. Claims 1, 4, 7-10, 13-14, 18, 20-21, 24, 34-35, 37, 40, 44, 47-48 and 51 are currently amended. Claims 25-33, 45-46 and 52-78 are withdrawn. Claims 15-16, 22-23, 36 and 49-50 are cancelled.

OBJECTIONS TO THE DRAWINGS

The drawings are objected to under 37 CFR 1.83(a) for not showing each and every feature of the invention as specified in the claims. Claims 15, 16, 22, 23, 49 and 50 have been cancelled, and the objection is overcome.

The drawings are objected to under 37 CFR 1.84(p)(4). The specification has been amended in various places to correct each of the informalities specified by the Examiner, and the objection is overcome.

OBJECTIONS TO THE SPECIFICATION

The Examiner has suggested that the format provided at 37 CFR 1.77(b) be followed. The specification has been amended accordingly.

The Examiner objected to the specification for various informalities at items 5A, 5B and 5C. The specification has been amended to correct these informalities and overcome the objection.

The specification is objected to under 35 USC 112, first paragraph as failing to provide adequate written description. The recitation in claims 1 and 36 that the cogs were designed to sheer off if the propellant overcharges the cartridge has been deleted, and the objection at item 7A is thereby overcome.

The recitation in Claims 13, 20 and 47 of a pressurized propellant container has been deleted, and the objection at item 7B is thereby overcome.

OBJECTIONS TO THE CLAIMS

Claims 8, 37, 40, and 44 are objected to under 37 CFR 1.75(c) as being of improper dependent form as failing to limit the subject matter of a previous claim. Each of claims 8, 37, 40 and 44, as now amended, does limit the subject matter of the respective claims from which they are dependent, and the objection is thereby overcome.

Claim 1 is objected to as containing two subsection (c) sections. Claim 1 has been amended to overcome this objection.

CLAIM REJECTIONS UNDER 35 USC 112, FIRST PARAGRAPH

Claims 1-17 and 36 are rejected under 35 USC 112, first paragraph as failing to comply with the written description and enablement requirements. The recitation in claims 1 and 36 that the cogs are designed to sheer off if the propellant overcharges the cartridge has been deleted, and the rejection is thereby overcome.

CLAIM REJECTIONS UNDER 35 USC 112, FIRST PARAGRAPH

Claims 1-24, 34-44 and 47-51 are rejected under 35 USC 112, second paragraph as being indefinite. The recitation in claims 1 and 36 that the cogs are designed to sheer off if the propellant overcharges the cartridge has been deleted, and the rejection at item 13a is thereby overcome.

The recitation in Claims 13, 20 and 47 of a pressurized propellant container has been deleted, and the rejection at item 13B is thereby overcome.

Claims 15, 16, 22, 23, 49 and 50 have been cancelled rendering the rejections at items 13C and 13D moot.

The recitation in Claims 14, 21 and 48 that the regulator hole is "of selected size" has been deleted, and the rejection at item 13E is overcome.

The recitation in Claims 18 and 34 that the bullet is of "sub-lethal" composition has been deleted, and the rejection at item 13F is overcome.

Claims 1, 4, 7, 8, 17, 18, 34-35, 37, 40 and 51, as now amended, are apparatus claims that do not include recitations of method steps, and the rejection at item 13G is thereby overcome. Claims 24 and 36 are cancelled rendering their rejections moot.

Claims 1, 9, 10, etc., as now amended, have proper antecedent basis, and the rejection at item 13H is overcome.

Claims 18 and 34 have been amended such that the recitation "sub-lethal" has been deleted, and the rejection at item 13I is overcome.

CLAIM REJECTIONS UNDER 35 USC 101

Claims 1, 4, 7, 8, 17, 18, 34-35, 37, 40 and 51 are rejected as being directed to non-statutory subject matter, but as now amended, are apparatus claims that do not include recitations of method steps. The rejection is thereby overcome.

CLAIM REJECTIONS UNDER 35 USC 102

Claims 1, 8-24, 34-44 and 47-51 are rejected under 35 USC 102(b) as being anticipated by US patent no. 6,095,051 to Saxby. For the reasons set forth below, this rejection is respectfully traversed.

Applicant's claim 1 recites a piston sleeve ... including one or more partially annular protrusion portions (hereinafter "cogs"); and a primary case ... including one or more complementary cogs to those of the piston sleeve. As understood, Saxby does not teach this feature. The Examiner is relying upon components 34 and 52 of Saxby's cartridge to meet the one or more partially annular protrusion portions or cogs 34 of Applicant's piston sleeve and the complementary cogs of Applicant's primary case, respectively. However, Saxby's components 34 and 52 are not **partially annular**. The components 34 and 52 illustrated at Saxby's Figure 2A are instead fully annular.

Axial coupling of Applicant's piston sleeve and primary case involves initially offsetting their respective cogs and compressing the cartridge together. Applicant's rotationally offset cogs slide past each other during axial coupling of his piston sleeve and primary case. Relative rotation of Applicant's sleeve and primary case after the compressing serves to overlap the respective cogs (e.g., in the view of Applicant's Figures 5B, 5C, 6B and 6C). Then, upon activation, the sleeve and primary case telescope apart such that the respective cogs of the piston sleeve and primary case ultimately meet.

Saxby's case 32 apparently couples with his piston 50, e.g., in Figure 2A, by moving the case 32 to the left and moving the piston 50 to the right. If attempted in the opposite direction, Saxby's fully annular protrusions 34 and 52 will collide and not permit his piston 50 and case 32 to be coupled. Because Saxby's protrusions 34 and 52 are fully annular, there is no relative angular offset position that will permit coupling of Saxby's case 32 and piston 50 in this manner, i.e., Saxby's cartridge may not be assembled by moving his piston 50 to the left and his case 32 to the right in Figure 2A of the 6,095,051 patent.

Therefore, Saxby's patent does not disclose each and every element of Applicant's claim 1, and Saxby's patent does not anticipate claim 1. Claims 8-14 and 17 are allowable as being dependent from claim 1. Claims 18 and 34 are allowable for the same reason as claim 1. Claims 19-21 and 24 are allowable as being dependent from claim 18. Claims 35, 37-44, 48 and 51 are allowable as being dependent from claim 34. Claims 15, 22-23, 36, and 49-50 are cancelled rendering their rejection moot.

CLAIM REJECTIONS UNDER 35 USC 103

Claims 2-7 are rejected under 35 USC 103(a) as being unpatentable over Saxby in view of US patent no. 6,845,716 to Hussein et al. Claims 2-7 are allowable as being dependent from claim 1 for the reasons set forth above that detail why Saxby neither teaches nor suggests all of the elements of Applicant's claim 1. Moreover, Hussein et al. also do not teach or suggest Applicant's

partially annular protrusion portions. Instead, Hussein et al. teach a screw-like thread that continues around and around in a corkscrew shape. In this way, the threads of Hussein et al. are more than partially annular, and even more than fully annular, and are in fact multiply annular. In addition, cartridge components of Hussein et al. cannot telescope apart upon activation of the cartridge, because they are screwed together. Telescoping upon activation is a feature of Applicant's cartridge that facilitates a reduced projectile energy as compared with Hussein et al. That is, Applicant allocates some of the generated energy to the telescoping such that it is not available for contributing to the kinetic energy of the projectile.


The Commissioner is authorized to charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 50-2019. A duplicate page is enclosed.

Respectfully submitted,

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Dated: May 18, 2006

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